33-34 have been rejected under 35 U.S.C. §103(a) as being unpatentable over McManus in view of Narveson. Claims 8-13, 15 and 30-32 have been rejected under 35 U.S.C. §103(a) as being obvious over McManus alone. The remaining dependent claims have been rejected under 35 U.S.C. §103(a) as being obvious over McManus variously in view of Narveson, Minato and/or Sato. In light of the following comments, Applicants respectfully submit that the independent claims and the dependent claims are allowable.

Claim Amendments

Independent claims 8, 12 and 30 have been amended to more fully recite Applicants' disclosed subject matter. Specifically, as amended, these claims now recite a memory as part of the display device. An exemplary memory common in the industry comprises a 128 byte data capacity. Entry of these amendments is respectfully requested.

§ 102 Rejections Under McManus

Claim Language of Independent Claims 20 and 25 Has Still Not Been Addressed

The Office Action fails to address the claim language set forth in the independent claims. Specifically, the Office Action nowhere acknowledges the claim language, "second brightness output" (claim 20) or the second "varying color brightness output" (claim 25). Further, the Office Action certainly offers no support to the rejections of this claim language. For this reason, the present rejection to claims 20 and 25 contains the same defect present in the First Office Action and thus continues to be improper.

Second Brightness Output is Not Taught

McManus' photometer-based measurement device is not suggestive of Applicants' comparative approach using more than one brightness output. Although, the Office Action does address a single brightness output signal in McManus, such a single brightness output signal is not a teaching or suggestion, explicitly or implicitly, of Applicants' "first brightness output" AND "second brightness output." (McManus, col. 3:1-20.) Instead, McManus proposes a single brightness output which is varied over a range of voltage inputs intervals which is measured by a photometer at each interval. (McManus, col. 3:20-44.)

Because a color measuring device is utilized to obtain a measurable color output, multiple comparative outputs, as claimed by Applicants, is not required. Simply, in McManus, one output is presented which is then measured for brightness. However,

Applicants claim a process where such a measurement device, i.e. photometer, is not available. Applicants propose comparing a known output (such as 0%, 50% and 100% brightness output) with a second "varying color brightness output" to achieve a baseline from which to create an approximation of the brightness characteristic. Such a second output, used for comparison purposes, if not needed with McManus' absolute measurement process. For this reason, McManus does not teach or suggest, but instead, teaches away from Applicants' multiple brightness outputs.

Second Varying Output Together With a First Known Output is Not Taught

For similar reasons, McManus nowhere discloses two brightness outputs where one varies in brightness. Applicants' claim language must be read in its entirety. Thus, although the Office Actions addresses that McManus proposes incrementally changing a brightness output from a minimum to a maximum, such teaching does not disclose Applicants' use of one known output together with one varying output. (McManus, col. 3:1-13, 3:59-68 and 4:27-39.) Here again, McManus' absolute measurement approach using an external brightness measurement device does not need to compare one output with another output. Instead, McManus' photometer simply measures the brightness of a single "full screen display." (McManus, col. 3:11-13.) The "full screen display" teaches away from a screen providing a first and a second brightness output. For this additional reason, the Office Action does not go as far as is required and thus does not support the §102 rejection.

Correlation of Brightness Outputs is Not Taught

Further, Applicants' correlation of a first and a second brightness output (via an "input signal associated with the second brightness output") is nowhere taught or suggested by McManus and is not supported in the Office Action. (Independent claims 20 and 25.) At least for the reasons above that McManus does not utilize a multiple output approach, this rejection must fail. But further, McManus' development of characteristic look-up tables is not a correlation of two outputs, but instead proposes assignment of an input voltage level to a brightness measurement of the resultant output color or intensity. (McManus, col. 5:9-11.) Such an assignment of input voltages to the associated absolute output measurements is wholly different than Applicants' correlation of two different output brightness levels.

Final Rejection is Improper Upon First Consideration of Claim Language

As stated in its earlier response, the first Office Action simply did not address the above mentioned claim language of claims 20 and 25. Now, in a second Office Action, these claims have been finally rejected. In addition to the above reasons that even this second rejection is fatal, at least the finality of this rejection is improper because Applicants have not been given an opportunity to respond to a first rejection on the merits. Instead, Applicants have only been able to defend the claim elements at issue for the first time in this Final Office Action. Such a response and potential amendments are limited when made in response to a final rejection compared to a non-final rejection. Thus, Applicants at least respectfully request the finality of the rejections to claims 20 and 25 be withdrawn.

§ 103 Rejections Under McManus

Independent claims 1, 16 and 33 have been rejected under 35 U.S.C. §103(a) over McManus in view of Narveson. Independent claims 8, 12 and 30 have been rejected under 35 U.S.C. §103(a) over McManus alone. Independent claims 8, 12 and 30 have been amended to more fully claim a memory device of a display device. Applicants' comments regarding claims 1, 8, 12, 16, 30 and 33 are addressed together below.

The Combination of Elements From McManus and Narveson Does Not Suggest Storage of Coefficients in a Display Device

The Office Action acknowledges that McManus does not teach or suggest data storage in a display device. Narveson is cited as allegedly teaching data storage in a display device. However, such a combination falls short of Applicants' specific claim language. Specifically, McManus is cited as allegedly teaching; (1) the use of coefficients, (2) storage of large data tables and (3) storage in a personal computer. Narveson is cited as allegedly teaching; (1) storage of large data tables and (3) storage in a PROM associated with a display device. Applicants respectfully assert that the combination of the teachings only goes as far as a combined teaching utilizing coefficients to develop large data tables which are stored in a PROM associated with a display device. This is not suggestive of Applicants' storage of coefficients, not large data tables, in a display device.

Specifically, Narveson's data table storage in a PROM is not suggestive of Applicants' storage of coefficients in a display device. Narveson proposes storage of large data tables, not discrete equation coefficients. (Narveson, col. 5:24-30.) These tables are memory intensive data blocks consisting of three 128 x 8 memory blocks. (Narveson, col.

5:30-38.) The Narveson tables are much like the tables of McManus distinguished in Applicants' prior Response. (McManus, col. 3:17-20, 3:35-42 and 3:54-59.) This amount of memory is simply not available in typical display memory.

Coefficient Storage in a Display Device is Not Inherent

Apparently the position of the Office Action is that from the teaching of Narveson to store large look up tables in a memory associated with a display device, it is inherent to store coefficients in the same manner. However, as stated above, the amount of required memory capacity taught by both McManus and Narveson teaches away from a system, such as claimed by Applicants, having available only limited memory resources. Instead, the data storage taught by Narveson would overload the capacity of memory disclosed by Applicants. In this way, the apparent inherency argument made in the Office Action does not bridge the gap left by the combined teaching of McManus and Narveson, namely large data table storage in PROM is not suggestive of coefficient storage in limited display memory. Instead, much like McManus, the PROM of Narveson contains a very large amount of memory by comparison to the typical amount of memory available in today's standard display memory, typically limited to only 128 bytes. Simply, the varied amount and types of data storage taught by Narveson, voltage-brightness characteristic, reflectance characteristic, etc., (Narveson, col. 4:20-35 and 5:24-60) is not concerned with the compression advantages disclosed by Applicants.

Other References

Various combinations of McManus with Minato and Sato have been asserted to support rejections to the dependent claims. As discussed in the prior response, the relevant sections being incorporated by reference, these cited references are not further instructive, nor have they been cited as such, on Applicants' independent claims. Further, as also discussed in Applicants' prior response, their combination with McManus is not supported in the Office Action and is improper.

Further, the dependent claims not specifically addressed in the above comments are allowable because the claims from which they depend are allowable.

CONCLUSION

For the foregoing reasons, Applicant submits that the application stands in condition for allowance. Withdrawal of the rejections and allowance of the claims is respectfully requested.

Respectfully submitted,

George W. Jordan III

George W. Jordan III, Reg. No. 41,880

Date: 11/21/01

AKIN, GUMP, STRAUSS, HAUER & FELD, L.L.P.
1900 Pennzoil Place, South Tower
711 Louisiana Street
Houston, Texas 77002
Telephone: (713) 220-5800
Facsimile: (713) 236-0822

ATTACHMENT B

Marked-Up Version Of Amended Claims (as of 11/21/01)

8. (TWICE AMENDED) A method of calculating a mathematical representation of the signal input-to-color brightness output relationship of a color display monitor during a display device manufacturing process, said method comprising the steps of:

providing input signals having predetermined incremental changes between said input signals to a color display device during the display device manufacturing process such that said color display device produces a predetermined pattern on the color display device's screen;

measuring a brightness of at least a portion of said predetermined pattern at each incremental change of said input signal and providing said measured brightness as brightness data to a general purpose computer;

correlating said input signals with said brightness data in said general purpose computer;

calculating coefficients of a mathematical representation, in said general purpose computer, of said correlated input signals to said brightness data;

storing during the display device manufacturing process said coefficients in a memory device [associated with] of said color display device.

12. (TWICE AMENDED) A color display device adapted to provide during a color display device manufacturing process a plurality of coefficients to a color display device driver circuit, said coefficients being related to a signal-input-to-brightness-output transfer function of said color display device, said color display device comprising:

input/output circuitry for connecting said color display device to a general purpose computer;

a display screen in communication with said input/output circuitry;

a data storage device[, associated with] of the display screen, for storing, at least, a plurality of coefficients for a signal-input-to-brightness-output transfer function, said plurality of coefficients being calculated after incremental signals are provided to said color display device, via said input/output circuit, such that a predetermined pattern is displayed on said display screen, a brightness data of said predetermined pattern is measured and correlated with each said incremental signal, a transfer function, having coefficients, is calculated based on said correlation of said incremental signals and said brightness data, said

coefficients then being stored in said data storage device, said coefficients being available to a color display device driver circuit when said color display device is connected to a general purpose computer.

30. (TWICE AMENDED) A method of color management for a color display device, the method comprising the steps of:

generating during a color display device manufacturing process a mathematical model of a brightness transfer function describing a relationship between color input signals to a color display device and color brightness output of the color display device; and

storing a representation of the mathematical model in a memory device [associated with] <u>of</u> the color display device.